

THE BIOLOGY OF NORTH-WEST ISLET, CAPRICORN GROUP.

(C.). FISHES.

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Plates xxxiii. and xxxiv.

During a holiday spent as a member of Mr. E. F. Pollock's party on North-west Islet, I was able to make a collection of fishes, thanks largely to the kindly help rendered by the turtle-hunters and members of the camping party, comprising about sixty per cent. of the numerous species observed there. Only those species of which specimens were secured are recorded in this paper. There is no freshwater on North-west Islet, and all the fishes were taken on or near the coral reefs there.

In compiling the following list, I have received material help from the card-index to Australian ichthyological literature made by the late Mr. Allan R. McCulloch, whilst Mr. T. Iredale has given helpful advice concerning taxonomy and early systematic literature.

Carcharinus stevensi Ogilby, *C. melanopterus* Quoy & Gaimard, *Rhynchobatus djiddensis* Forskal, *Dasyatis kuhlii* Müller & Henle, *Lutianus amabilis* De Vis, *Gymnochranius audleyi* Ogilby, *Scorpaena grandisquamis* Ogilby, *Choerodon venustus* De Vis, *Paragobiodon echinocephalus* Rüppell, *Gobiodon verticalis* Alleyne & Macleay, *Echeneis naucrates* Linnaeus, and *Lepadichthys frenatus* Waite are the only fishes recorded from North-west Islet in various papers by Ogilby and McCulloch (1).

Family ORECTOLOBIDAE.

CHILOSCYLLIUM PUNCTATUM.

Chiloscyllium punctatum Müller & Henle, Plagiost., 1841, 18, pl. iii. Java.

An ovigerous female, 885 mm. in total length, was greyish-brown above, lighter below, lacking spots or bars.

Egg.—Each oviduct of this specimen contained an egg, one of which measured 96 x 47 mm. Shell golden-brown, coated with golden slimy fibres, forming a lateral loop as described and figured by Ogilby and McCulloch (2). A smaller egg-case, shining dark brown interiorly, 77 x 33 mm., cast upon the beach at North-west Islet. Another was found on Bramble Cay by Mr. C. Hedley.

Localities.—North-west Islet, Capricorn Group, Queensland; speared by Mr. C. Coles, December 1st, 1925.

A male specimen is in the Australian Museum from off Flat Top Island, Mackay, Queensland; coll. "Geranium," 12th October, 1925. Regd. No. IA.2573.

(1) Vide McCulloch and Whitley, Mem. Old Mus. viii., pt. 2, 1925, 125-182.

(2) Ogilby and McCulloch, Proc. Roy. Soc. N.S. Wales, xlii., 1909, 287, f. 1.

CHILOSCYLLIUM OCELLATUM.

Squalus ocellatus Bonnaterre, Tabl. Encycl. Meth. Ichth., 1788, 8. La mer du Sud.

Chiloscyllium ocellatum Ogilby & McCulloch, Proc. Roy. Soc. N.S. Wales, xlii., 1908, 290.

Very common amongst coral at North-west Islet, where, like the preceding species, it is known as "Wobbegong."

Family RHINOBATIDAE.

RHINOBATUS ARMATUS.

Rhinobatis armatus Gray, Ill. Indian Zool., ii., 1832-5, pl. xcix. (*vide* Sherborn).

Rhinobatus armatus Ogilby, Mem. Q'd. Mus., v., 1916, 85 & 95, f. 1.

This species is evidently common in shallow water at North-west Islet. The largest seen was a male, 42.5 inches in length. One female, 583 mm. long, preserved (Austr. Mus. Regd. No. IA.2590). Another specimen, in the Australian Museum, is from Townsville, Queensland.

Family DASYATIDAE.

TAENIURA LYMMA.

Raja lymma Forskal, Descr. Anim., 1775, 17. Red Sea.

Taeniura lymma McCulloch, Rec. Austr. Mus., xiii., 2, 1920, 41, pl. x.

One large specimen from North-west Islet, speared by Mr. C. Coles; Austr. Mus. Regd. No. IA.2588. Other specimens are in the Museum from Cape York, Queensland, and the Sir Edward Pellew Islands, Gulf of Carpentaria.

Family CLUPEIDAE.

STOLEPHORUS ROBUSTUS.

Spratelloides robustus Ogilby, Proc. Linn. Soc. N.S. Wales, xxii., 1, 1897, 64. Coast of New South Wales.

Stolephorus robustus McCulloch, Rec. Austr. Mus., xiii., 2, 1920, 42, pl. xi., f. 1.

Three specimens, 32-40 mm. long; ejected by White-capped Noddies (*Megalopterus minutus*) on North-west Islet.

Family ENGRAULIDAE.

ENGRAULIS AUSTRALIS.

Atherina australis White, Journ. Voy. N.S. Wales, 1790, 296, pl. —, f. 1. New South Wales.

Engraulis australis McCulloch, Rec. Austr. Mus., xiii., 2, 1920, 43, pl. xii., f. 1.

Dr. W. MacGillivray saw a White-capped Noddy (*Megalopterus minutus*) vomit fifty anchovies of this species. Eight specimens, 27-43 mm. long, were preserved.

Loc.—North-west Islet, Capricorn Group, Queensland; 5th December, 1925.

Family MURAENIDAE.

GYMNOTHORAX UNDULATUS.

Muraenophis undulata Lacepède, Hist. Nat. Poiss., v., 1803, 629 & 644, pl. xix., f. 2. No locality given.

Muraena (Gymnothorax) undulata Weber & Beaufort, Fish. Indo.-Austr. Archip., iii., 1916, 376 (references and synonymy).

Two specimens, 139-285 mm. long. Purplish with yellow reticulations.

Family SYNGNATHIDAE.

MICROGNATHUS BREVIROSTRIS.

Syngnathus brevirostris Rüppell, Neue Wirbelth. Fische, 1840, 144. Massowah, Red Sea.

Corythoichthys tanakae Jordan & Starks, Proc. U.S. Nat. Mus., xxx., 1906, 696, f. 2. Tanegashima, southern Japan.

Two males and six females, 24 to 62 mm. long, agree with the figure and description by Jordan & Starks quoted above. Other specimens in the Australian Museum are from Port Denison.

Family APOGONIDAE.

APOGON FASCIATUS.

Mullus fasciatus White, Journ. Voy. N.S. Wales, 1790, 268, pl. —, f. 1. New South Wales.

Amia fasciata fasciata McCulloch, Biol. Res. Endeavour, iii., 3, 1915, 116 (references and synonymy).

One specimen, 28.5 mm. long.

APOGON FASCIATUS NOVEMFASCIATUS.

Apogon novemfasciatus Cuvier & Valenciennes, Hist. Nat. Poiss., ii., 1828, 154. Timor & Guam.

Amia fasciata novemfasciata McCulloch, Biol. Res. Endeavour, iii., 3, 1915, 117. One specimen, 60 mm. long.

Family SERRANIDAE.

PLECTROPOMA MACULATUM LEOPARDUS.

Holocentrus leopardus Lacépède, Hist. Nat. Poiss., iv., 1802, 332, & 367. No. locality.

Plectropoma maculatum leopardus Boulenger, Cat. Pere. Fish. Brit. Mus., i., 1895, 161.

Several specimens of this species were captured by trailing a line from a launch between North-west Islet and Wilson Islet, Capricorn Group, 3rd December, 1925. It is known locally as the Coral Cod.

D.viii/11; A.iii/8; P.i/15; V.i/5; C.13.

Life-colours.—Flushing pearl-grey with many small bright blue spots which extend on to the vertical fins. Eyelid greenish; iris golden. Edges of pectorals orange; upper and lower margins of caudal flushed with wine-red. After death, the ground colour becomes uniform reddish-brown and the spots fade to a lighter blue. Pectoral rays yellowish, the membranes hyaline. Caudal edged with white.

Family PLESIOPIDAE.

BELONEPTERYGION FASCIOLATUM.

Acanthoclinus fasciolatus Ogilby, Mem. Austr. Mus., ii., 1889, 63, pl. iii., f. 3. Lord Howe Island.

Belonepterygion fasciolatum McCulloch, Mem. Q'ld. Mus., iii., 1915, 51.

Common in coral blocks at North-west Islet.

Family CHAETODONTIDAE.

CHAETODON RAINFORDI.

Chaetodon rainfordi McCulloch, Rec. Austr. Mus., xiv., 1, 1923, 4, pl. ii., f. 1. Holbourne Island, off Port Denison, Queensland.

One specimen, 98 mm. long. Common amongst coral at North-west Islet.

HOLACANTHUS PERSONIFER.

Holacanthus (Chaetodontoplus) personifer McCulloch, Rec. W. Austr. Mus., i., 3, 1914, 221, pl. xxxi. Shark Bay, Western Australia. *Id.* Biol. Res. Endeavour, iv., 4, 1916, 195, pl. lvi., f. 2.

Fairly common at North-west Islet, where it is known as the Yellow-tailed Leather-jacket. One large specimen preserved.

Family POMACENTRIDAE.

POMACENTRUS CHRYSURUS.

Pomacentrus chrysurus Cuvier & Valenciennes, Hist. Nat. Poiss., v., 1830, 423. (ex *Chaetodon chrysurus* Broussonet M.S.). La Mer du Sud.

One specimen, 76 mm. long (IA.2598). Two others vomited by Reef Heron (*Demigretta sacra*), at North-west Islet, 26th November, 1925.

This species has been recorded from Darnley Island by Alleyne & Macleay (3) and from Bowen by Schmeltz (4). Specimens are in the Australian Museum from St. Crispin Reef, off Port Douglas, and Cairns, Queensland.

AMPHIPRION POLYMNUS.

Anthias polymnus Bloch, Nat. Ausl. Fische, vi., 1792, 103 (*vide* Sherborn), and Ichthyologie, ix., 1797, 89, pl. cccxvi., f. 1. East Indies.

Prochilus polymnus Bleeker, Atlas Ichth., ix., 1877, pl. cccc., f. 7-8.

Amphiprion polymnus Jordan & Seale, Proc. Davenport Acad. Sci., x., 1905, 13, pl. vii.

One specimen (IA.2626), 62 mm. long, from North-west Islet, where the species is common amongst anemones in a restricted area of the lagoon. The young have a white band through the caudal peduncle which disappears with age; fins orange-yellow in life.

GLYPHISODON COELESTINUS.

Glyphisodon coelestinus Cuvier & Valenciennes, Hist. Nat. Poiss., v., 1830, 464, and ix., 1833, 508 (ex *Chaetodon coelestinus* Solander M.S.). Mer des Indes.

Abudefduf coelestinus Jordan & Seale, Bull. U.S. Fish. Bur., xxv., 1906, 285, pl. xli., f. 1.

One young specimen, 21 mm. long, from North-west Islet constitutes a new record for Queensland. Others are in the Australian Museum from Murray Island, Two Isles, Port Denison, and Masthead Island, Queensland; Lord Howe Island; New Hebrides; Philippines; Amboina; Samoa; Friendly Islands.

GLYPHISODON ZONATUS.

Plate xxxiii.

Glyphisodon zonatus Cuvier & Valenciennes, Hist. Nat. Poiss., v., 1830, 483. New Guinea.

Glyphidodontops zonatus Bleeker, Atl. Ichth., ix., 1877, pl. cccvii., f. 3.

Glyphidodon brownriggii Günther, Fische Südsee, vii., 1881, 232, pl. exxvii., f. e. (not *Chaetodon brownriggii* Bennett).

Two specimens, 56-88 mm. long, agree excellently with Günther's figure quoted above. Each has D.xiii/13; A.ii/13, last rays divided.

Localities.—Murray Island, Torres Straits (C. Hedley and A. R. McCulloch); Two Isles, N. Queensland (C. Hedley and E. A. Briggs); North-west Islet, from coral blocks (G. P. Whitley).

(3) Alleyne and Macleay, Proc. Linn. Soc., N.S. Wales, i., 1877, 343.

(4) Schmeltz, Cat. Mus. Godeff. vii., 1879, 52.

Family SIGANIDAE (5).

SIGANUS CAPRICORNENSIS sp. nov.

Plate xxxiv.

D.i, xiii/10; A.vii/9; P.16; V.i/3/i; C.17.

Head (59 mm.) 4.3 in the length to the end of the middle caudal rays (258). Depth below 6th dorsal spine (105) 2.4 in the same. Eye (16) equal to narrowest part of caudal peduncle, 3.6 in the head. Interorbital (21) 2.8, 4th dorsal spine (37) 1.6 in the same.

Form elongate ovate, compressed. Profiles convex, that of dorsal surface steeper than that of ventral.

Head largely naked, but with scales on cheeks, and upper part of operculum. Eye large, equal in diameter to its distance from the supero-posterior angle of the maxillary. Interorbital markedly convex. Snout rounded. Two nostrils on each side of head, posterior larger than anterior. Opercular edges entire; a small opercular flap. Gill-openings wide. Prominent striae on preoperculum, operculum, and exposed portion of shoulder-girdle, and a few smaller ones at the postero-inferior border of the orbit. A bony crest in front of the eye. Maxillary not reaching vertical of anterior border of eye. Teeth forming a comb-like cutting edge.

Body covered with very small cycloid scales which extend onto the nape, breast, and caudal fin. Vent slightly behind posterior membranes of ventrals. Lateral line indistinct, following the dorsal curvature.

Dorsal spines strong, preceded by a procumbent spine; middle rays much longer than the last. Anal similar to dorsal but with thicker spines and shorter rays. Pectoral slightly emarginate, 4th ray longest. Ventrals angular, the first spine equal in length to the 5th anal spine. Caudal forked.

Colours.—Ground colour chocolate brown, a little lighter on the membranes between the dorsal and anal spines. Honey-brown spots, slightly wider than their interspaces, extended over the head (including eyes and lips), body, tail and dorsal and anal spines and rays during life, but those on the head and fins have faded away since death and preservation in formalin. Oblique bars of honey-brown on dorsal and anal fin-membranes; fork of caudal edged with the same colour. Pectoral rays yellowish-brown, membranes hyaline. Tips of spines and an area between the ventrals whitish. No dark blotch on shoulder.

Described and figured from the holotype, 258 mm. long to the end of the middle caudal rays. Australian Museum Regd. No. IA.2589.

Locality.—Coral reef at North-west Islet, Capricorn Group, Great Barrier Reef, Queensland; coll. G. P. Whitley, December, 1925.

Family LABRIDAE.

CHOERODON OLIVACEUS.

Choerops olivaceus De Vis., Proc. Linn. Soc. N.S. Wales, ix., 4, 1885, 876. Cardwell and Cape York, Queensland.

One large specimen (IA.2591) from North-west Islet, where it is known as the "Blue-bone" parrot fish. Other specimens in the Australian Museum are from Wide Bay district, Queensland, and Port Jackson, New South Wales.

Colours.—Ground-colour bluish-green, gradating to olivaceous on the head. From the corner of the jaw to near the ventral fin, the ground colour gives place to white. Eye peacock blue. Teeth bluish. An indistinct blue bar from the upper border of the operculum to the eye. A series of short yellow vertical bars

(5) The validity of Forskal's name *Siganus* is doubtful, but I follow most modern authors in using it until an opportunity for investigating the status of the fish names in the "Descriptions Animalium" shall arise.

on a blue ground near the preorbital border. Ill-defined flushes of blue occur on the body, one of which, darker than the rest, extends along the side from below the pectoral. Faint longitudinal bars of blue, interspersed with yellow, on the caudal peduncle.

Dorsal fin greyish-blue mottled with yellow; pencils of rays and spines bluish with inframarginal bands of orange. Anal light blue proximally gradating to greyish, crossed by irregular yellow bars; margin whitish. Pectoral dull bluish, upper rays darkest. Ventral white; a yellow streak along first ray, extreme bases of rays violet. Caudal greyish with yellow blotches, membranes pea-cock blue between bases of rays.

CHOERODON VENUSTUS.

Choerops venustus De Vis, Proc. Roy. Soc. Q'ld., i., 3, 1884, 147. Moreton Bay.

Recorded from North-west Islet by Ogilby (6). A specimen in the Australian Museum (IA.2072) has fourteen dorsal spines. It was collected between 17° and 19° S. Lat., Great Barrier Reef, Queensland, by Dr. W. E. J. Paradiée, of H.M.A.S. "Geranium."

Family CORIDAE.

HALICHOERES OPERCULARIS.

PlatyGLOSSUS opercularis Günther, Cat. Fish. Brit. Mus., iv., 1862, 148. Fiji. *Id.*

Playfair, Fish. Zanzibar, 1866, 95, pl. xii., f. 1.

Halichoeres opercularis Jordan & Seale, Fish. Samoa, 1906, 302, pl. xlvii., 3.

Colours.—Ground-colour light green. A broad salmon-tinted hook-shaped band on cheeks and opercles bordered with white; a bronze blotch over opercular flap, above which a bronze band extends from maxilla, dips below orbit and follows curve of hook-shaped band. Pupil black, surrounded by coppery and an outer area of light green. Chin light sea-green. Some bronze bands extend along the scale-rows of the body from the head but are irregular and broken. A blotch of dark-brown-edged scales on middle of side, another behind opercular flap and another immediately before caudal peduncle. A dark scale on back below 6th dorsal spine. A large blotch of rose on lower part of side before origin of anal. Dorsal light green with oblique wavy reddish-brown bars, between which are yellow blotches. A black ocellus on 2nd and 3rd dorsal spines. Anal light yellowish-green with oblique red bars, darker proximally, interspersed with white-edged yellow blotches. Caudal rays yellow, the median with reddish-brown blotches; membrane hyaline. Pectoral rays yellow. Ventrals very light yellowish-green with a tinge of chestnut anteriorly.

Locality.—North-west Islet; found dead on reef by Mrs. V. Lowe, 10th December, 1925. Specimens are in the Australian Museum from Masthead Island, St. Crispin Reef, and Murray Island, Queensland; Lord Howe Island; New Hebrides; Samoa.

PSEUDOLABRUS GUNTHERI.

Pseudolabrus guntheri Bleeker, Versl. Akad. Amsterdam, xiv., 1862, 130. New Holland. (*vide* Weber & Beaufort, Fish. Indo-Austr. Archip., i., 1911, 25).

Id. McCulloch, Rec. Austr. Mus., ix., 3, 1913, 368, pl. xvii (references and synonymy).

One young specimen, 32 mm. long.

Family SCARIDAE.

SCARUS FASCIATUS.

Scarus fasciatus Cuvier & Valenciennes, Hist. Nat. Poiss., xiv., 1840, 222. Molluscas.

Pseudoscarus rivulatus Alleyne & Macleay, Proc. Linn. Soc. N.S. Wales, i., 1877,

(6) Ogilby, Commenc. Fish. Fisher, Qld, 1915, 34.

345. *Id.* Kent, Great Barrier Reef, 1893, 295 & 370, chromo. pl. xv., 4—5a. (Not *Scarus rivulatus* Cuv. & Val.).

One specimen, 340 mm. long, shows the following characters:—D.ix/10; A.ii/9. L. lat. 24. Small molars present. Caudal margin moderately lunate.

Colours when fresh.—General colour bluish-green, each scale on sides with a nut-brown centre, those on breast and top of head without. Cheeks and lower surface of head orange. Chin and preorbital region crossed by reticulating green markings. Pupil yellow; eyelids green. Teeth white.

Dorsal edged deep blue-green, with a wide inframarginal orange area which changes to dirty orange near the green base of the fin. Large oval green spots between spines and rays. Anal dirty yellowish-grey, broadly edged with bluish-green; green interradiat blotches near base of fin. Caudal orange-brown, with a distal row of blue and a proximal row of green blotches. Ventral yellowish with a blue band anteriorly. Lower portion of pectoral bright green, the edge hyaline; upper border blue followed by a brown bar. Axil dark brown.

Localities.—North-west Islet reef, Capricorn Group, Queensland; speared by Mr. George Haack, 5th December, 1925.

North Reef, Capricorn Group (Ogilby, Commere. Fish. Fisher. Q'ld., 1915, 34, as *Callyodon rivulatus*).

Cape Grenville, Queensland (Alleyne & Macleay, *Loc. cit.*, 346).

Family PARAPERCIDAE.

PARAPERCIS CYLINDRICA.

Sciaena cylindrica Bloch, Nat. Ausl. Fische, vi., 1792, 42 (*vide* Sherborn), and Ichthyologie, ix., 1797, 37, pl. cxcix., f. 1. Locality ?.

One specimen of this common Queensland fish was collected at North-west Islet by Miss Hilda Geissmann; a smaller one was found in the stomach of a ray (*Dasyatis* sp.) together with prawns, gobies, and gastropod shells.

Specimens are in the Australian Museum from Queensland, Lord Howe Island, Friendly Islands, Amboina, and Cochin China.

Family Gobiidae.

PARAGOBIODON ECHINOCEPHALUS.

Gobius echinocephalus Rüppell, Atl. Reise Nordl. Afrika, Fische, 1830-1, 136, pl. xxiv., 3. Massowah, Red Sea.

Paragobiodon echinocephalus McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 239, pl. xxxiv., f. 1 (references and synonymy).

Ten specimens, 22-29 mm. long. Common at North-west Islet, where they are called "Greenies." Found amongst coral which Mr. C. Hedley, F.L.S., has kindly identified as *Seriatopora hystrix* Dana, in the branches of which they remain even when the coral is taken from the water.

Life-colours.—Green, lighter on abdomen; dorsal and anal tinged yellowish-green. Tips of dorsal, anal and caudal rays brown. Ventrals and pectorals green. Eye dark blue, surrounded by a dark golden ring. Other specimens agree in colouration with the form A. of McCulloch & Ogilby (*loc. cit.*).

BATHYGOBIUS FUSCUS.

Gobius fuscus Rüppell, Atl. Reise Nordl. Afrika Fische, 1830-1, 137. Red Sea, *Mapo fuscus* McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 231 (references and synonymy).

Bathygobius fuscus Jordan & Jordan, Mem. Carneg. Mus., x., 1, 1922, 78. *Id.* McCulloch & Whitley, Mem. Q'ld. Mus., viii., 2, 1925, 171.

Several specimens obtained, 40-70 mm. long.

AMBLYGOBIUS PHALAENA.

Gobius phalaena Cuvier & Valenciennes, Hist. Nat. Poiss., xii., 1837, 92. Vanicolo.

Amblygobius phalaena McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 253 (references and synonymy).

One specimen, 36 mm.

CALLOGOBIUS HASSELTII.

Eleotris hasseltii Bleeker, Nat. Tijdschr. Ned. Indie, i., 1851, 253. Anjer, W. Java.

Callogobius hasseltii McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 217 (references and synonymy).

Three specimens, 25-47 mm. long.

Family ELEOTRIDAE.

ASTEROPTERIX SEMIPUNCTATUS.

Asterropterix semipunctatus Rüppell, Atl. Reise Nordl. Afrika, Fische, 1830-1. 138, pl. xxxiv., f. 4. Massowah, Red Sea. *Id.* McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 273 (references and synonymy).

Eleven specimens, 34-50 mm. long, from shallow reef waters of North-west Islet, where the species was commonly found. Austr. Mus. Regd. No. IA.2638.

EVIOTA VIRIDIS.

Allogobius viridis Waite, Rec. Austr. Mus., v., 3, 1904, 177, pl. xxiii., f. 3. Lord Howe Island.

Eviota viridis McCulloch, *Op. cit.*, xii., 10, 1919, 260.

Seventeen specimens, 17-32 mm. Very common at North-west Islet.

Family BLENNIIDAE.

BLENNIUS INTERMEDIUS.

Blennius intermedius Ogilby, Mem. Q'ld. Mus., iii., 1915, 127. Darnley Island.

Eleven specimens, 18-44 mm. long, from North-west Islet. Specimens from the Whitsunday Group and Bowen, Queensland, collected by Mr. E. H. Rainford, in the Australian Museum.

ECSENIUS MANDIBULARIS.

Ecsenius mandibularis McCulloch, Rec. Austr. Mus., xiv., 2, 1923, 122, pl. xv., f. 1-2. Masthead Island, Q.

Two spirit specimens, 39 mm. long, from North-west Islet. One is lilac-brown, the other light brown with a dark head; both have white lateral spots. The types are faded formalin specimens.

PETROSCIRTES ROTUNDICEPS.

Petroscirtes rotundiceps Macleay, Proc. Linn. Soc. N.S. Wales, vi., 1881, 9. Port Jackson, N.S. Wales.

Three specimens, 38-55 mm. long.

Specimens in the Australian Museum from Moreton Bay, Port Denison, Great Sandy Strait, Dunk Island, Caloundra, and Rat Island, Queensland, and Port Stephens and Port Jackson, New South Wales.

PETROSCIRTES LINEATUS.

Petroscirtes lineatus De Vis, Proc. Linn. Soc. N.S. Wales, ix., 1884, 698. Murray Island, Torres Strait.

Three specimens, 21-57 mm. long, from North-west Island, and one, 63 mm., from Port Denison, show the following characters:—D.29-31; A.17-21; black band on dorsal present or absent.

SALARIAS FASCIATUS.

Blennius fasciatus Bloch, Nat. Ausl. Fische, ii., 1786, 110, pl. elxii., f. 1. (*fide* Sheborn).

Salarias fasciatus McCulloch, Rec. Austr. Mus., xiv., 2, 1923, 123, pl. xv., f. 3.

Six specimens, 44-75 mm. Common in crevices of coral and rocks.

SALARIAS MELEAGRIS.

Salarias meleagris Cuvier & Valenciennes, Hist. Nat. Poiss., xi., 1836, 332, "terre de Van-Diemen" = Timor? *Id.* McCulloch & McNeill, Rec. Austr. Mus., xii., 2, 1918, 16. *Id.* McCulloch, Rec. Austr. Mus., xiv., 5, 1926, 12.

Eight specimens, 56-100 mm. long, show interesting colour-variation. Six have the characteristic markings figured by Günther (7), whilst the others are very dark brown so that the spots and bars are very difficult to detect.

SALARIAS DUSSUMIERI.

Salarias dussumieri Cuvier & Valenciennes, Hist. Nat. Poiss., xi., 1836, 310, Malabar. *Id.* McCulloch & McNeill, Rec. Austr. Mus., xii., 2, 1918, 18, pl. iv., f. 2.

Three specimens, 71-85 mm. long. The two anterior dorsal rays of the smallest specimen are deformed, being little more than half the height of the rest and strongly curved.

SALARIAS CRENULATUS PALLIDUS subsp. nov.

Salarias crenulatus McCulloch, Rec. Austr. Mus., xiv., 2, 1923, 124, pl. xvi., f. 1-2. *Id.* McCulloch & Whitley, Mem. Q'ld. Mus., viii., 2, 1925, 175. (? Not Weber).

The specimens described by McCulloch from Masthead Island, which is very near North-west Islet, differ from the typical *S. crenulatus* Weber (8) in several details which he set forth on page 125 of his paper quoted above. I consider these differences worthy of subspecific status and accordingly propose the name *pallidus* for the Australian form of this species.

One spirit specimen, 53 mm. long, from North-west Islet (IA.2609).

TRIPTERYGION ATROGULARE.

Tripterygion atrogulare Günther, Journ. Mus. Godef., i., 1873, 267. Bowen. Five specimens, 20-42 mm.

Family GOBIESOCIDAE.

LEPADICHTHYS FRENATUS.

Lepadichthys frenatus Waite, Rec. Austr. Mus., v., 3, 1904, 180, pl. xxiv., f. 2. Lord Howe Island.

Five specimens, 17-43 mm. long. Fairly common in coral blocks.

(7) Günther, Fische Sudsee vi., 1877, 208, pl. cxvi., f. d.

(8) Weber, Notes Leyden Mus. xxxi., 1909, 144, and Siboga Exped. lvii., Fische 1913, 532, f. 112. Sanana, Sula Islands, and Tiur Island, East Indies.

Family CONGROGADIDAE.

CONGROGADUS.

Congrogadus Günther, Cat. Fish. Brit. Mus., iv., 1862, 388 (*subducens*).

This name has been mis-spelled *Conyrodus* by Lydekker, Roy. Nat. Hist., v., 1896, 439. Lydekker's name appears to have been overlooked.

CONGROGADUS SUBDUCENS.



Text-fig. 1.

Congrogadus subducens Richardson. Larva, 23 mm. long, from North-west Islet, Capricorn Group, Queensland. G. P. Whitley, *del.*

Machaerium subducens Richardson, Ann. Mag. Nat. Hist., xii., September, 1843, 175, pl. vi. Port Essington. *Id.* Rept. 12th meet. Brit. Assoc. Adv. Sci. (1842) 1843, Trans. Zool. Sect., 69. *Id.* Ichth. Erebus & Terror, 1846, 72, pl. xlv., f. 1-6.

Congrogadus subducens Günther, Cat. Fish. Brit. Mus., iv., 1862, 388.

A larva, 23 mm. long, has the following characters: D.69; A.58; P.10; C.9. Body naked. Origin of dorsal over pectoral fin. No lateral line discernible on body. When alive, it was green with transparent fins. Head crossed by radiating silvery bars edged superiorly with blackish. Eye golden.

Loc.—North-west Islet, Capricorn Group, Queensland; rock-pool, 12th December, 1925, coll. G. P. Whitley.

A larger larva, 46 mm. long, was collected by Hedley and McCulloch at Murray Island, Torres Strait, in August or September, 1907. It has minute scales, and the anterior part of the lateral line is clearly discernible under a lens.

BLENNODESMUS SCAPULARIS.

Blennodesmus scapularis Günther, Proc. Zool. Soc. Lond., 1871, 667, pl. lxvii., f. a. Port Mackay, Queensland. *Id.* McCulloch, Mem. Q'ld. Mus., iii., 1915, 55. Three specimens, 16-88 mm. long.

Family BROTLIDAE.

DINEMATICHTHYS MIZOLEPIS.

Dinematichthys mizolepis Günther, Ann. Mag. Nat. Hist. (3), xx., 1867, 66. Cape York.

Three specimens from North-west Islet. Colour in life: pinkish, the fins redder. The largest specimen in the Australian Museum is 80 mm. long, from Port Denison, Queensland; coll. E. H. Rainford.

EXPLANATION OF PLATES.

Plate xxxiii.

Glyphisodon zonatus Cuvier & Valenciennes. A series of specimens from the New Hebrides, showing variation of colouration with growth. Natural size. A. R. McCulloch, *del.*

Plate xxxiv.

Siganus capricornensis Whitley. Holotype, 258 mm. long to the end of the middle caudal rays, from North-west Islet, Capricorn Group, Queensland.